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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/875,301	06/06/2001	Thomas J. Pearsall		9212

7590 07/25/2003  
William L. Kraye  
1771 Helen Drive  
Pittsburgh, PA 15216

EXAMINER

NICOLAS, WESLEY A

ART UNIT	PAPER NUMBER
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1742

DATE MAILED: 07/25/2003

3

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.		Applicant(s)	
	09/875,301		PEARSALL ET-AL	
	Examiner		Art Unit	
	Wesley A. Nicolas		1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 15-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                  | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413) Paper No(s). <u>3</u> . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)                |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2</u> . | 6) <input type="checkbox"/> Other: _____   |

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**DETAILED ACTION**

***Election/Restriction***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-14, drawn to a method, classified in class 205, subclass 333.
  - II. Claims 15-20, drawn to a product, classified in class 57, subclass 416.
2. The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by another and materially different process such as electroless plating.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

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5. During a telephone conversation with Todd Patterson on July 17, 2003, a provisional election was made **with** traverse to prosecute the invention of Group I, claims 1-14. Affirmation of this election must be made by applicant in replying to this Office action. Claims 15-20 have been withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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8. Claims 1-6, 8, and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Samsonov et al. (5,616,229), and further in view of Ball et al. (5,644,910).

Samsonov et al. teach a method of making a wear resistant coating comprising forming a hard coating on an interior surface of a substrate by:

- immersing said substrate in an electrolytic bath comprising a passivating agent (Table 2: Second bath: "sodium tetrasilicate") and an electrolytic agent (Table 2: Second bath: "potassium hydroxide"); and
- passing a modified shaped-wave alternating electric current from a source of 250 to 800 volts through said interior surface of said substrate, wherein said modified shaped-wave electric current rises from zero to its maximum height and falls to below 40% of its maximum height within less than a quarter of a full alternating cycle thereby causing dielectric breakdown and the formation of a ceramic coating on said interior surface (Abstract and Fig. 1), and
- removing said substrate from said electrolytic bath (col. 6, lines 52-60 and Fig. 4, numeral 52).

Samsonov et al. fail to specifically teach the formation of said hard coating on an incipient spinning rotor cup, or of the specific electrode shaped to provide a peripheral terminus.

Ball et al. teach a process of applying an electrolytic coating to an incipient spinning rotor cup (cols. 1-4 and more specifically col. 2, line 10: "electrolytic process").

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Claims 1 and 2 are rejected because it would have been obvious and within the ordinary skill in the art at the time the invention was made to have modified the Samsonov et al. invention to electrolytically coat a spinning rotor cup as taught by Ball et al. with the conditions taught by Samsonov et al. because Ball et al. teach a process of applying an electrolytic coating to an incipient spinning rotor cup (cols. 1-4 and more specifically col. 2, line 10: "electrolytic process") which produces a durable smooth surface (col. 2, lines 6-41).

Claims 3 and 8 are rejected because it would have been obvious and within the ordinary skill in the art at the time the invention was made to have used an electrode with a peripheral terminus which is positioned centrally within the spinning rotor cup because such an electrode would have allowed efficient plating in the interior of the cup. It is well within the ordinary skill in the art to modify the electrode dimensions to fit or conform to the specific substrate shapes.

Although Samsonov et al. is silent with respect to a "colloidal" silicate (only teaches generally of a sodium tetrasilicate in Table 2), claim 4 is rejected because it would have been obvious and within the ordinary skill in the art at the time the invention was made to have used a colloidal silicate because similar processes can reasonably be expected to yield products which inherently have the same properties. In re Spada, 15 USPQ2d 1655 (CAFC 1990).

Claim 5 is rejected because Samsonov et al. teach that said electrolytic agent is an alkali metal hydroxide (Table 2: Second Bath: "potassium hydroxide").

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Claim 6 is rejected because Samsonov et al. teach that the substrate has an aluminum surface (claim 1).

Claim 11 is rejected because Samsonov et al. teach that the current is a modified shaped-wave alternating current (Abstract).

Claim 12 is rejected because Samsonov et al. teach that the substrate has an aluminum surface (claim 1).

Claim 13 is rejected because Samsonov et al. teach that said electrolytic agent is an alkali metal hydroxide (*i.e.* potassium hydroxide) with a concentration of 0.5 g/L (Table 2: Second bath which overlaps Applicant's claimed range of 0.5 to 2 g/L).

***Allowable Subject Matter***

9. Claims 7, 9-10, and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claims 7 and 14, the specific colloidal suspension of sodium silicate in the form  $\text{Na}_2\text{O}-x\text{SiO}_2$  ( $x \Rightarrow 2.55$  by weight) was not taught or suggested by the prior art of record.

Regarding claims 9 and 10, the specific internal annular surface comprises the surface of a collection groove and an electrode comprising a body and a downwardly oriented peripheral flange were not taught or suggested by the prior art of record.

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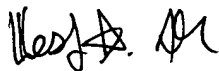
***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wesley Nicolas whose telephone number is (703)305-0082. The examiner can normally be reached on Mon.-Thurs. from 7am to 5pm.

The Supervisory Primary Examiner for this Art Unit is Roy King whose telephone number is (703) 308-1146.

The fax number for this Group is (703) 872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.



Wesley A. Nicolas

July 23, 2003